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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

MAKI, STEVEN D

ART UNIT

PAPER NUMBER

1733

NOTIFICATION DATE

DELIVERY MODE

06/05/2007

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/733,314	Applicant(s) LIEDERER, WERNER	
	Examiner Steven D. Maki	Art Unit 1733	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 March 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12, 14-71 and 73 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12, 14-71 and 73 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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1) A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 3-14-07 has been entered.

2) The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3) The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Europe 822

4) **Claims 1-10, 16-17, 19-24, 30, 35-47, 53-54, 56-62, 65-68, 70 and 73 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Europe 822 (EP 970822).**

Contrary to applicant's arguments, the profile structures in a base pitch of Europe 822 have different lengths. For example, in base pitch BLmin in figure 1, one profile

structure has a length of a fraction of L_{max} + a fraction of L_{min} whereas the other profile structure has a length of a fraction of L_{min} and a fraction of L_{min} .

Europe 822 teaches a vehicle tire having a tread pattern as shown in figures 1 and 2. The tread pattern comprises blocks separated by circumferential grooves and lateral grooves. In the figure 2 embodiment, the lateral grooves are continuously curved from the tread edge to the tire equator such that the lateral grooves are more curved near the tire equator than the tread edge. As can be seen from figure 2, the curved lateral grooves extend to but not beyond the center circumferential grooves so that the lateral grooves on both sides of the tread form a "V-shaped groove". In figures 1-2, the base pitches have the different lengths BL_{max} and BL_{min} and two shoulder blocks 3a are provided for each central block 2a. Each base pitch comprises two shoulder blocks separated by a cross groove. Europe 822 teaches that three shoulder blocks may be used for each central block 2a. See machine translation. When three shoulder blocks are used, each base pitch BL_{max} and BL_{min} comprises two cross grooves.

Claims 1, 43 and 61 are anticipated by Europe 822's vehicle tire. With respect to continuously curved grooves extending to but not beyond a straight central circumferential groove, Europe 822 teaches this subject matter. It is noted that Europe 822's lateral grooves on each side extend to but not beyond the central circumferential groove so that the lateral grooves on both sides of the tire equator form "V-shaped grooves". It is also noted that long block 2a is between the straight central circumferential groove and an outer straight circumferential groove. See figure 2. With respect to the base pitches, claim 1 reads on each of the one base pitch and the

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another base pitch each having two profile structures separated by a cross groove.

Claim 1 fails to require a different number of profile structures and/or a different number of cross grooves in the base pitches. The claimed profile structures read on the shoulder blocks 3a, which can number two, within each base pitch. As to claim 43, Europe 822 teaches that three shoulder blocks (profile structures) may be used in each base pitch. Claim 43 reads on each of the one base pitch and the another base pitch each having three profile structures separated by two cross grooves. Claim 61 reads on each of the one base pitch and the another base pitch each having two profile structures separated by a cross groove. With respect to V-shaped groove, each base pitch in the figure 2 embodiment has part of one of the V-shaped grooves.

Europe 822 is considered to anticipate claims 1, 43 and 61. In any event: It would have been obvious to one of ordinary skill in the art to provide Europe 822's tire with two base pitches having different circumferential lengths (e.g. BL_{min}, BL_{max}) such that each base pitch comprises three different length shoulder blocks (profile structures) and two cross grooves since (1) Europe 822, directed to reducing noise and obtaining uniform wear, shows the tread has having two different length base pitches wherein each base pitch comprises one central block, two different length shoulder blocks and one cross groove and (2) Europe 822 suggests using three shoulder blocks for one central block as an alternative to using two shoulder blocks for one central block.

As to claim 2, Europe 822 teaches a radial ply vehicle tire.

As to claims 3, 8-10, 16-17, 19-24, 44-47, 53-54, 56-59, 62-64, 67-68, 70, 73, Europe 822 suggests using two or three shoulder blocks in each base pitch wherein

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each shoulder block has a length determined by different length sub-pitches such as L_{min} and L_{max} .

As to claim 4, the blocks form the tread surface.

As to claims 5-7, the base pitches and shoulder blocks are arranged each arranged in a "specific sequence" (e.g. BL_{max} , BL_{max} , BL_{min}).

As to claim 30, note the cross groove with pitch L_{min} .

As to claims 35-36, the shoulder blocks are arranged in a circumferential row.

As to claims 37-41, Europe 822 teaches extending the curved lateral grooves from the tread edge to the central circumferential groove such that the grooves are more curved near the center circumferential groove. See figure 2.

As to claims 42 and 60, Europe 822's tire is inherently obtained by a "method of making a tire".

As to claim 65, note the pocket grooves in the central blocks.

As to claim 66, Europe 822 teaches using three circumferential grooves as indicated by figure 2.

5) Claims 25-29 and 63-64 are rejected under 35 U.S.C. 103(a) as being unpatentable over Europe 822 as applied above and further in view of Europe 436 (EP 268436).

As to claims 25 and 26, it would have been obvious to use four or five profile structures in Europe 822's tread since (1) Europe 822 teaches using two or three shoulder blocks in a base pitch and (2) Europe 436 teaches using more than two blocks such as five blocks in a base pitch of a tire tread to reduce noise.

As to claims 27-29, the claimed ratio of profile structure length would have been obvious in view of Europe 436's suggestion to use a length ratio of 1.5-1.9 for the blocks.

As to claims 63-64, it would have been obvious to one of ordinary skill in the art to use three base pitches instead of two base pitches for Europe 822's tread in view of Europe 436's suggestion to use three base pitches for a tire tread to reduce noise wherein each base pitch, like that of Europe 822, comprises plural blocks and transverse grooves.

Great Britain

6) Claims 1-2, 4-6, 20-23, 30-31, 35-42 and 71 are rejected under 35 U.S.C. 102(a), (b) as being anticipated by Great Britain (GB 2376217).

Great Britain discloses a pneumatic radial tire (e.g. size such as 225/45ZR17) comprising blocks defined by circumferential grooves, lateral grooves and cross grooves. Circumferential groove 2 is located at the tire equator (line CL). Continuously curved lateral grooves 5 extend from the tread edge to but not beyond the straight center circumferential groove 2. See figure 1 and page 7. The curved lateral grooves 5 define "base pitch" wherein each base pitch comprises two shoulder blocks and one cross groove 7. Great Britain teaches that the curved grooves 5 are formed at variable pitches to convert pitch noise to white noise. See figure 1, page 6 lines 7-10, page 10 lines 23-25, page 11 lines 1-5..

The claimed tire is anticipated by Great Britain. The claimed base pitches read on the base pitches formed by the curved lateral grooves 5. The claimed base pitch

reads on Great Britain's base pitch comprising lug groove 5, blocks 6B1 and subgroove 7. Each base pitch therefore comprises two profile structures (blocks 6B1). The claimed method steps are inherent in the manufacture of Great Britain's tire.

7) Claims 1-12, 14-71 and 73 are rejected under 35 U.S.C. 103(a) as being unpatentable over Great Britain in view of at least one of Europe 822, Europe 436, Japan 610 (JP 01-314610) and German 061 (DE 10145601).

With respect to German 061, Applicant cannot rely upon the foreign priority papers to overcome this rejection because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.

Great Britain is considered to anticipate claim 1. The lateral grooves 5 shown in figure 1 are considered to be continuously curved as claimed. In any event: it would have been obvious to provide Great Britain's inclined lateral grooves as continuously curved grooves since Great Britain teaches shaping the inclined grooves 5 in a circular arc which is convex towards the reverse direction to the rotating direction of the tire (page 7). Great Britain is also considered to disclose the claimed base pitches. In any event, it would have been obvious to one of ordinary skill in the art to arrange Great Britain's lateral grooves such that the resulting tread has different length base pitches comprising profile structures as claimed in view of Great Britain's teaching to arrange the lateral grooves 5, which define a repeating geometric pattern, at variable pitches to reduce noise and in view of the suggestion from at least one of Europe 822, Europe 436, Japan 610 and German 061 to use "base pitches" of different lengths to reduce

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noise of a tire tread with a "base pitch" of the tire tread being defined by a repeating geometric unit comprising at least two shoulder blocks and at least cross groove.

As to claim 2, Great Britain teaches a radial pneumatic tire.

As to claims 3, 8-10, 16-17, 19-24, 44-47, 53-54, 56-59, 62-64, 67-68, 70, 73, it would have been obvious to provide Great Britain's tire tread with profile structures and cross grooves as claimed in view of Great Britain's teaching to use two shoulder blocks and a cross groove for each base pitch and in view of the suggestion from at least one of Europe 822, Europe 436, and Japan 610 to use "base pitches" of different lengths to reduce noise of a tire tread with a "base pitch" of the tire tread being defined by a repeating geometric unit comprising at least two shoulder blocks and at least cross groove wherein (a) Europe 822 suggests using two or three shoulder blocks in each base pitch wherein each shoulder block has a length determined by different length pitches such as L_{min} and L_{max} , (b) Europe 436 teaches providing each base pitch having a length L_{Gj} with blocks having different lengths L_i , and (c) Japan 610's teaching to provide each base pitch with two shoulder blocks having different lengths.

As to claim 4, the blocks form the tread surface.

As to claims 5-7, the base pitches and shoulder blocks disclosed by Great Britain and each of the secondary references are arranged each arranged in a "specific sequence".

As to claims 11-12, 14-15, 18, 48-52, 55, and 69, it would have been obvious to use profile structures having the same length with base pitches as claimed in view of Great Britain's teaching to use shoulder blocks of the same length within the base pitch

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and optionally Europe 436's or German 061's teaching to use shoulder blocks of the same length in at least one base pitch.

As to claims 30 and 31, the cross grooves 7 have a width narrow than a width of the curved grooves 5.

As to claims 35-36, the shoulder blocks are arranged in a circumferential row.

As to claims 37-41, Great Britain teaches extending the curved lateral grooves from the tread edge to the central circumferential groove such that the grooves are more curved near the center circumferential groove. See figure 2.

As to claims 42 and 60, Great Britain's tire is inherently obtained by a "method of making a tire".

As to claim 65, note the pocket grooves in the intermediate blocks.

As to claim 66, Great Britain teaches using five circumferential grooves as indicated by figure 1.

As to claims 25 and 26, it would have been obvious to use four or five profile structures in Great Britain's base pitch since (1) Europe 822 teaches using two or three shoulder blocks for the central block in a base pitch and (2) Europe 436 teaches using more than two blocks such as five blocks in a base pitch of a tire tread to reduce noise.

As to claims 27-29, the claimed ratio of profile structure length would have been obvious in view of Europe 436's suggestion to use a length ratio of 1.5-1.9 for the blocks.

As to claims 32-34, it would have been obvious to use the claimed base pitches in view of Europe 822's teaching to use two or three shoulder blocks for the central

block for each base pitch and optionally Europe 436 or German 061's teaching to use different number blocks in each base pitch.

As to claims 63-64, it would have been obvious to one of ordinary skill in the art to use three base pitches for Great Britain's tread in view of the suggestion from at least one of Europe 436, Japan 610 and German 061's suggestion to use three base pitches for a tire tread to reduce noise.

As to claim 71, Great Britain teaches arranging the curved grooves at variable pitches and thereby teaches a base pitch having two blocks, one cross groove 7 and only one curved groove 5.

Remarks

8) Applicant's arguments with respect to claims 1-12, 14-71 and 73 have been considered but are moot in view of the new ground(s) of rejection.

Applicant's arguments filed 3-14-07 have been fully considered but they are not persuasive.

Applicant argues that the tread in figure 2 of Europe 822 merely shows two apparently different pitch lengths with two profile structures of each pitch length having the same circumferential length. Applicant is incorrect. The profile structures (shoulder blocks) in each base pitch have different lengths. See figure 1. It is noted that the figure 2 embodiment is the same as the figure 1 embodiment except that the lateral grooves are continuously curved.

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Applicant's argument that Europe 436 does not disclose diagonal grooves is not persuasive since Europe 436's pitching concepts are independent of the angle of inclination of the lateral grooves.

Applicant's argument that Great Britain does not disclose continuously curved lateral grooves 5 is not persuasive since Great Britain teaches shaping the inclined groove 5 along a circular arc (page 7).

Applicant's argument that Great Britain does not disclose the claimed base pitches is not persuasive since each base pitch in Great Britain comprises two shoulder blocks, one groove 5 and one groove 7.

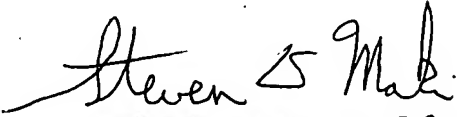
9) No claim is allowed.

10) Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven D. Maki whose telephone number is (571) 272-1221. The examiner can normally be reached on Mon. - Fri. 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571) 272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Steven D. Maki
May 28, 2007


STEVEN D. MAKI 5-29-07
PRIMARY EXAMINER